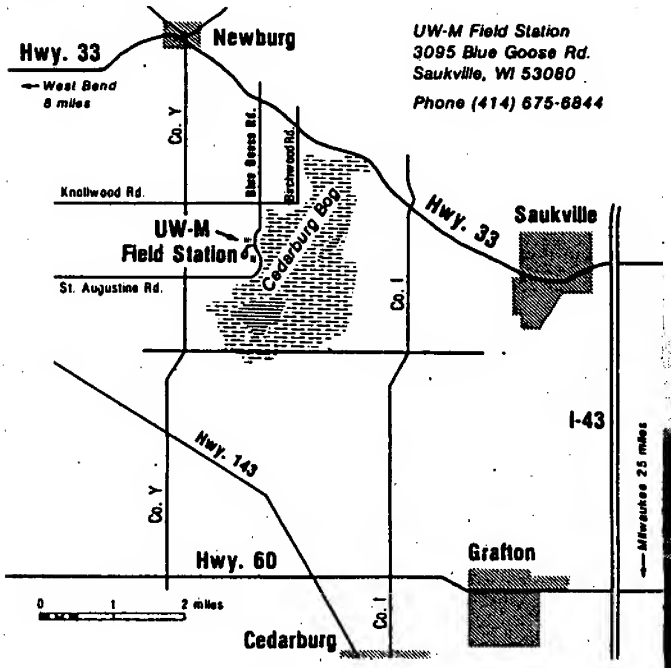
# NEWSLETTER of the Wisconsin Entomological Society

Volume 14; Number 2 May 1987


## FIELD TRIP AND MEETING AT CEDARBURG BOG 12-14 JUNE

The facilities of the UW-Milwaukee Field Station will be available for our use from Friday evening through Sunday afternoon. In conjunction with the collecting trip, a meeting is scheduled at the Field Station on Saturday, 13 June at 1:30 PM. Phil Pellitteri will give a short talk on the "Common Ticks of Wisconsin," and other short talks are planned. Members are encouraged to share collection records, recent collecting trips and other items of interest. We need and welcome your participation. Our past outings here have been most enjoyable.




Rustic lodging with shower and kitchen facilities is available at the Field Station. A limited number of beds are available, but bring your own sleeping bag or bedding, and towels. Meals will be on your own - you may bring your own food and supplies or eat at restaurants in nearby Grafton or Cedarburg.

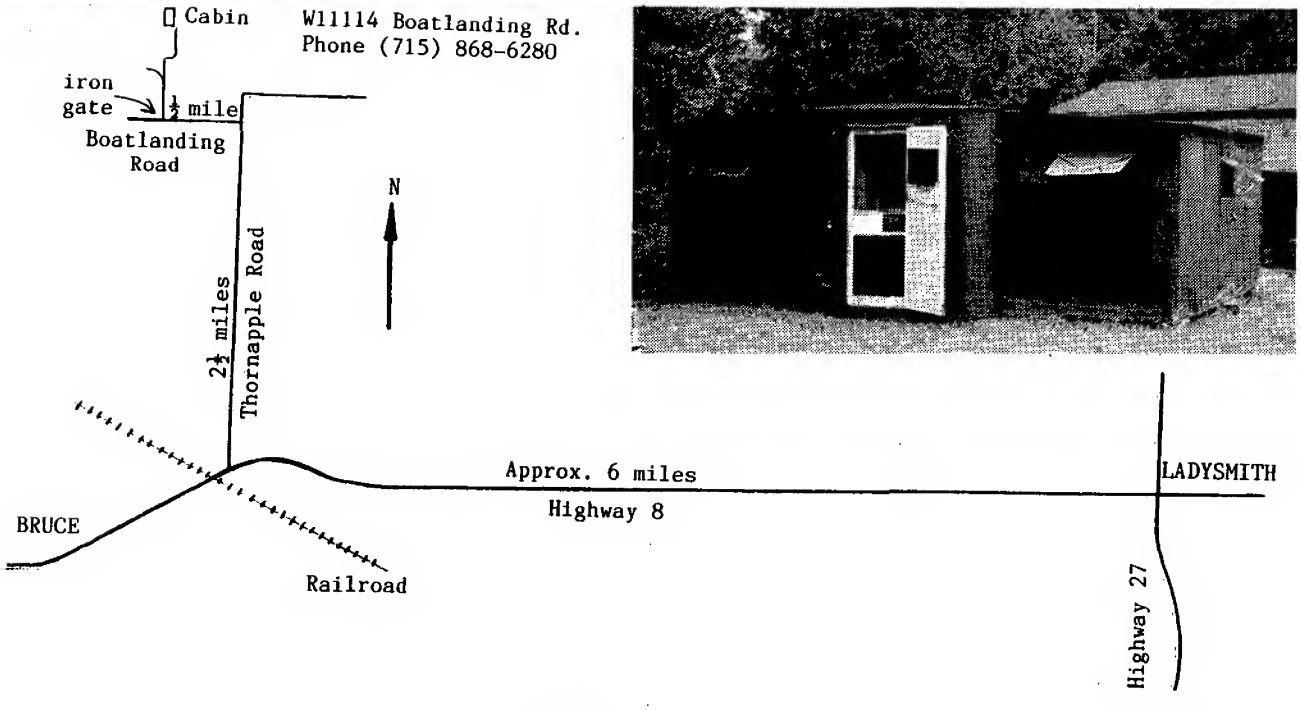
The Cedarburg Bog is one of the largest and least disturbed bogs in eastern Wisconsin. The habitat consists of extensive swamp conifer forest and areas of open bog, which are readily accessable via the boardwalk, shown crossing the stream in the middle of the bog in the photo above. The surrounding uplands are maple-beech forest, with old field and restored prairie habitats on the Field Station grounds.


The Newsletter of the Wisconsin Entomological Society is published three times a year, at irregular intervals. It is provided to encourage and facilitate the exchange of information by the membership, and to keep the members informed of the activities of the organization. Members are strongly encouraged to contribute items for inclusion in the Newsletter. Please send all news items, notes, new or interesting insect records, season summaries, research requests etc. to the editor: Les Ferge, 7119 Hubbard Avenue, Middleton, WI 53562.

FIELD TRIP TO LADYSMITH 24-26 JULY

Bob and Hermine Dicke will host a field trip at their cabin in the beautiful northwoods of Rusk County. Sleeping accommodations are available in the cabin and in a separate trailer. Bring your own bedding and towels. Indoor bathroom facilities and shower are available, plus a swimming pool and three-hole golf course! An outstanding variety of habitats for collecting surround the cabin, including northern hardwood forest, river bottom forest, tamarack swamp and old field. Those who took part last year had a wonderful time, and found collecting quite good despite cool rainy weather.

The cabin is located off Highway 8, between Bruce and Ladysmith (see map below). From southern Wisconsin, get onto I-94, exit onto Highway 10 east (at Osseo), then shortly (approx. 1½ miles) take Highway R to Highway 27 at Augusta. Follow Highway 27 to Ladysmith, then take Highway 8 west 6 miles to Thornapple Road. The drive in from Boatlanding Road is a single-track dirt road through an old field and into the woods. The cabin is quite far in, so don't give up.



PRESIDENT'S NOTES Phil Pellitteri

After nine years as Secretary of the Society, I have moved over to the "Big Chair." The final outcome of the 1987 election is that Jim Parkinson has been elected Vice President, Glenn Esenther as Secretary, Bob Borth as Treasurer and myself as President.

For my first official act I would like to thank Dr. Dan Young for his years of service as President of the Society. Dan has added much to the Society with his insight, hard work and love of the science. Some important changes have taken place during Dan's tenure, and he has helped us through some tough times. There is some question in my mind that there would still be a Wisconsin Entomological Society without Dan's guidance and enthusiasm. All of us members owe Dan a big THANK YOU!

The March meeting was a big success. There were just under 30 people in attendance. We had speakers coming out of the woodwork and not just the same old faces. The program became so full that we did not have enough time to interact after the meeting. Because of this we will start future meetings at 1:30 PM, to allow more open time for interaction before we break for the evening meal. The speakers were Les Ferge, who shared with us some of the interesting and unusual Lepidoptera he captured during the 1986 season; Mark Evans, who summarized his recent collecting trips to Mexico, and Dan Young, on a computer program to print specimen labels. Greg Lintereur presented some very interesting life history information on the pear slug (Caliroa cerasi), and I talked about some recently introduced insects such as the Asian roach in Florida, and some new arrivals in Wisconsin such as the Pharoah ant and the Japanese beetle. We also had a guest speaker from the Department of Natural Resources. Bill Smith is in charge of the Natural Heritage Inventory Program. Bill outlined the ongoing program and asked for members help and input in compiling an inventory of rare invertebrates in the state. Collection records, distribution and abundance data will be used to get a handle on what we have in Wisconsin, and what we could potentially lose through careless resource management. As might be expected, we have a poor handle on the invertebrate fauna of the state. We hope to keep in close contact with Bill in the future.

There are three dates that should be put onto this year's calendar. We have planned a meeting on 13 June coinciding with the collecting trip to the Cedarburg Bog 12-14 June. The field trip to Bob Dicke's cabin near Ladysmith is scheduled for 24-26 July. Details appear on the previous pages. Saturday, 7 November has been picked as the date for the fall meeting and Photo Salon. This should give members all spring and summer to take those award-winning shots.

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BEAR TICK UPDATE Phil Pellitteri

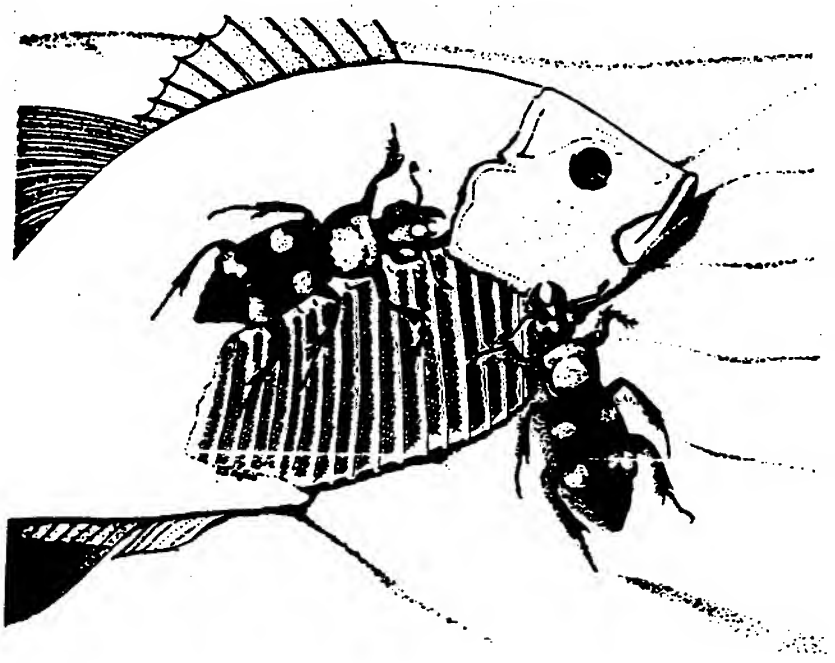
Ixodes damini - what we call the bear tick around here and what they call the deer tick out east. This is the primary vector of Lyme disease in the state. Unofficially, there may have been as many as 500 cases in Wisconsin last year. Those who spend time in the woods should become familiar with the disease and the tick. A tick repellent that contains permethrin has shown good results in trials, and even kills ticks after 2-3 washings of treated clothing. It is marketed as Permanone Tick Repellent. It is legal to use in 24 states, but is not registered in Wisconsin. The company hopes to receive Federal approval for use throughout the U.S. this July. I will keep you informed on the status of this product and where to get it if it becomes available.

GIANT CARRION BEETLE Submitted by Bill Smith

Nicrophorus americanus Olivier, 1790 (Coleoptera: Silphidae)
[Endangered Species Fact Sheet provided by The Nature Conservancy.]

SUMMARY The largest of the North American carrion beetles, Nicrophorus americanus was formerly widespread in the forest regions of the eastern North American continent. Until recently it was thought that the last collection was in 1974, and the species was feared extinct. However, new records indicate an extremely limited distribution in Rhode Island State, and further surveys in primary forests are urgently needed.

DESCRIPTION Nicrophorus americanus is the largest North American silphid (sexton, burying or carrion beetles), reaching a length of 25-36 mm (3,4,11). It is easily distinguished by its large size, but also by the red frons and red pronotal disc on a black ground colour (9). The antennal club is orange and the black elytra have two pairs of scalloped red spots (1,4). Detailed modern descriptions of the species have been made (1,4,9). N. americanus is closely related to the European species N. germanicus, which is similar in its large size, the orbicular pronotum, and the shape of the hind femora (9).



DISTRIBUTION The Giant Carrion Beetle was formerly widespread in the forest regions of the eastern North American continent. Prior to 1960 the extensive records include Alabama, Arkansas, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska (10), New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington D.C. and Wisconsin in the U.S.A., and Nova Scotia, Ontario and Quebec in Canada. All these records are listed in the report of a survey of American museums (14), unless otherwise indicated.

From 1960 onwards, the only records are from Michigan (1961 (4)), Illinois (1961 (3)), Indiana (1965 (14)), Missouri (1966 (14)), Nebraska (1969 (15)), Ontario (1972 (14)), Arkansas (1973/4 (3)), and Kentucky (1974 (5)). With no records after 1974, the species has been feared extinct (5,13), but a series dated 1974 to 1981 from the State of Rhode Island has recently come to light (7). Nevertheless, this must represent one of the most disastrous declines of an insect's range ever to be recorded.

POPULATION The size of the population in Rhode Island State is unknown, but evidently represents only a tiny proportion of the Giant Carrion Beetle's former numbers.

HABITAT AND ECOLOGY Although the Giant Carrion Beetle is one of the most distinctive members of the North American beetle fauna, virtually nothing has been published on its natural

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history (4,5). Fortunately the closely related European species N. germanicus has been studied, and it is believed that the two species may have similar basic habits (3). Like all Nicrophorus, a pair of adults buries small vertebrate carcasses in the soil. The male and female work together, lying on their backs beneath the carcass and using their legs to lever the body to soft ground up to a metre away (12). It is interred in a chamber probably 20 cm or deeper in the soil, thus preventing other scavengers, particularly flies, from finding the booty (3). As the corpse decomposes, it is fed upon by the adults and worked into a compact ball, with a conical depression which collects nutritious liquids. The female lays her eggs in the wall of a passage directly above the carcass, and the hatched larvae are fed on the liquids (3,12). Parental care usually continues right through to pupation (3,12).

In common with other large Nicrophorus, N. americanus was probably originally associated solely with mature mesic forests (3). Only there would the soil be of a suitable texture to allow the deep burial necessary to protect carcasses (3). In some instances, however, the Giant Carrion Beetel was able to utilize man-made habitats. In the 1920s the beetles were attracted to waste fish used as fertilizer on agrcultural land in New York State, but when legislation prevented this practice, the beetles disappeared (8). Partitioning of resources between Nicrophorus species is achieved by different seasonal patterns and particularly by habitat preference (2). There is no evidence that certain species prefer a particular type of carcass, although a certain type of carcass may be more common in preferred habitat. Hence, although N. americanus has been noted feeding on dead fish (8), this would not be its natural food in forests. There are few data on this aspect, perhaps because most specimens have been caught at lights and night, rather than on carcasses (4).

SCIENTIFIC INTEREST AND POTENTIAL VALUE The genus Nicrophorus is unique among beetles in the extent of parental co-operation and care of the young (12). The adults can produce a clearly audible buzzing sound by rubbing the elytra across the abdomen (12,13). The mechanism is used when the beetles are alarmed, and also in communicating with the larvae, a most unusual behaviour pattern (12,13). Carrion beetles are also important in their role as decomposers of organic matter. Only about one third of the carcass is consumed by the adults and young, the remainder being left to decompose into a nutritious contribution to soil fertility (11).

THREATS TO SURVIVAL A recent appraisal of the biology of Nicrophorus species concludes that the Giant Carrion Beetle is mainly dependent upon primary deciduous forest (3), a vegetation type now reduced to less than one per cent of its former area in the U.S.A. (6). Two other large species of Nicrophorus, N. germanicus in Europe and N. concolor in Japan and China, are also associated with temperate forests. N. concolor is common in the mature. undisturbed temperate forests which are still quite widespread in Japan. Conversely N. germanicus is suffering localization and reduction of its abundance throughout its range (3). So little is known about the present distribution of the Giant Carrion Beetle that it is impossible to assess any further threats.

CONSERVATION MEASURES TAKEN None.

CONSERVATION MEASURES PROPOSED Surveys are urgently needed in the major areas of primary forest remaining within the historical range of the Giant Carrion Beetle. If new populations are found, ecological studies will be necessary to determine the species' precise requirements. Suitable habitat, including any currently known localities, should be protected and managed in accordance with the findings. The U.S. Fish and Wildlife Service Office of Endangered Species should be encouraged to declare federal Endangered status to this beetle.

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# Natural Heritage Inventory Program

In 1980, several southern Wisconsin counties inventoried 10 years earlier were resurveyed. The follow-up revealed a loss of 10 percent of the natural areas previously identified and another 10 percent seriously damaged.

In times of rapid development, a tool to identify natural areas and the many plant and animal communities that may inhabit them is critical to preservation of rare species statewide.

In 1985 the Natural Heritage Inventory program was established to provide an on-going, up-to-date storehouse of ecological information for botanists, land use planners, land managers and landowners. Access to such information is invaluable during early planning stages for new highways, utility corridors, drainage ditches and other development projects.

This inventory system was established in cooperation with The Nature Conservancy, a private conservation organization responsible for developing the inventory process now active in 40 states. Preservation begins with the information furnished by these comprehensive inventories of natural communities. All the data collected during the inventories is cataloged in an integrated system of maps, computer databases and paper files.

The Natural Heritage Inventory program has three primary goals:

- continually identify the state's rare or unique plants, animals and communities;
- rank them according to how severely endangered they are in Wisconsin and worldwide;
- map their geographical occurrences including quality and viability;

Those natural communities and species that are most in danger of disappearing or even becoming extinct can be saved, but first they must be located and identified. A program to inform private landowners of their preservation options has been initiated by The Nature Conservancy in cooperation with the DNR. The inventory information is used in developing a registry of sites and maintaining landowner contact.

RESEARCH REQUEST

Data is needed for an Annotated Checklist of the Butterflies of Wisconsin, which is being proposed as a special publication of the Wisconsin Entomological Society. Since the appearance of Ebner's book The Butterflies of Wisconsin in 1970, a considerable amount of collecting has been done in the state, and has resulted in hundreds of new records, making the need for an updated, comprehensive and permanent compilation ever more pressing. In order to be as complete as possible, any and all records are wanted, regardless of how common a species is. Please report place and date of capture, name of collector, and any further observations such as habitat, flowers visited, host plant or rearing data etc. Arrangements can be made to identify any questionable specimens. All contributors will be acknowledged in the publication.

Please send data to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562.

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MICHIGAN ENTOMOLOGICAL SOCIETY MEETING IN UPPER PENNINSULA

W.E.S. members have been invited to attend the Annual Meeting of the Michigan Entomological Society on Friday, June 5, at the Ford Forest Conference Center near L'Anse. Sleeping accommodations and meals are available at the Center, located in an attractive area of northern hardwoods, with other diverse collecting habitats nearby, such as jack-pine plains and sphagnum-heath bogs. For the Lepidopterist, there are ample opportunities to collect a number of unique and interesting boreal species, such as the Columbia Silkmoth, the Jutta Arctic, plus the Bog and Frigga Fritillaries, to name just a few. Information and registration forms are available from Les Ferge.

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Street address City State Zip

_____ Individual Membership ($4.00/year)

_____ Sustaining Membership ($10.00/year)

_____ Patron Membership ($25.00/year)

GENERAL AREAS OF INTEREST

____ Aquatic Insects ____ Collecting/Taxonomy

____ 4-H or Scouts ____ Photography

____ Extension work ____ Physiology

____ Life History Biology, Behavior ____ Apiculture

____ Other _____

SPECIFIC INTEREST (Order, Family, Genus)

_____

If you are familiar with certain insect taxa, would you be willing to identify specimens for members? _____ Yes _____ No

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